

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ARMIN DRESCHER

Appeal No. 1997-2990
Application 08/260,318

HEARD: September 11, 2001

Before HAIRSTON, JERRY SMITH and LEVY, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1 and 2, which constitute all the claims in the application. A first amendment after final rejection was filed on July 26, 1995, and a second amendment after final rejection was filed on September 1, 1995. Both amendments were denied entry by the examiner.

The disclosed invention pertains to an optoelectronic CCD line scanner camera which provides a loss-free arrangement for lengthening scan lines and avoiding optical and diffraction effects with the aid of a special beam splitter and a number of linear CCD detector arrays.

Representative claim 1 is reproduced as follows:

1. A loss-free arrangement for lengthening scan lines and avoiding secondary optical and diffraction effects in a single optoelectronic camera with the aid of a special beam splitter and a number of linear CCD detector arrays, wherein

a single optics lens system (O) of the optoelectronic camera is followed by an optical beam splitter (ST), including alternately transparent segments (ST_1 , ST_3 , ...) with substantially complete transmission and reflective segments (ST_2 , ST_4 , ...) with substantially complete reflection segments (ST_1 - ST_4 , ...), the transparent segments and the reflective segments being interleaved via intermediate transition zones providing a gradual change from full reflection to full transmission;

from the number of linear CCD detector arrays (CCD_1 , CCD_2 , CCD_3 , CCD_4 , ...), two long line modules (M_1 , M_2) are formed, so that in each long line module, free interstices (FR) between the linear CCD detector arrays are shorter than the length of a light-sensitive segment of one linear CCD detector array;

two long line modules (M_1 , M_2) each are disposed, one following the beam splitter (ST), below its transparent segments, (ST_1 , ST_3 , ...), and the other one laterally of this beam splitter (ST) next to its reflective segments (ST_2 , ST_4 , ...), such that the centers of the linear CCD detector arrays (CCD_2 , CCD_4 , ...) of the one long line module (M_2) coincide with the

centers of the free interstices (FR) of the other long line module (M_1), and the lengths of the free interstices (FR) in each long line module (M_1 , M_2) are selected to be so short that for the optoelectronic camera, a radiometrically largely loss-free signal is assured,

on the one hand by means of substantially loss-free signals from the central segment of a linear CCD detector array behind the completely transparent, or respectively behind the completely reflective, segment of the beam splitter (ST), and

on the other hand by means of electronic summation of signals from adjacent linear CCD detector arrays (CCD_1 , CCD_2 , CCD_2 , CCD_3 ; CCD_3 , CCD_4 ; ...) in coinciding segments, corresponding to the transition zones ($\ddot{U}B_1$, $\ddot{U}B_2$, $\ddot{U}B_3$, $\ddot{U}B_4$, ...), between the long line modules (M_1 , M_2).

The examiner relies on the following references:

Coale	3,571,489	Mar. 16, 1971
Miller et al. (Miller)	5,155,623	Oct. 13, 1992
Suganuma et al. (Suganuma)	5,220,626	June 15, 1993

Claim 1 stands rejected under 35 U.S.C. § 112, second paragraph, as failing to particularly point out and distinctly claim the invention. Claims 1 and 2 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Suganuma in view of Miller and Coale.

Rather than repeat the arguments of appellant or the examiner, we make reference to the briefs and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the obviousness rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the briefs along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that claim 1 complies with the requirements of the second paragraph of 35 U.S.C. § 112. We are also of the view that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1 and 2. Accordingly, we reverse.

We consider first the rejection of claim 1 under the second paragraph of 35 U.S.C. § 112. The rejection states,

There is no antecedent basis for "the completely transparent" and "the completely reflective" segments of the beam splitter

[answer, page 3]¹.

The examiner notes that the use of the term "completely" in lines 34 and 35 of claim 1 is contradictory to the use in lines 9 and 10 where the phrase "substantially complete" is used to refer to these beam splitter segments [id., page 5]. Appellant responds that those skilled in the art would suffer absolutely no claim confusion from this claim language [reply brief, pages 2-3]. A claim must set out and circumscribe a particular area with a reasonable degree of precision and particularity when read in light of the disclosure as it would be by the artisan. In re Moore, 439 F.2d 1232, 1235, 169 USPQ 236, 238 (CCPA 1971); In re Johnson, 558 F.2d 1008, 194 USPQ 187 (CCPA 1977). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed in light of the specification. Seattle Box Co., v. Industrial Crating & Packing, Inc., 731 F.2d 818, 826, 221 USPQ 568, 574 (Fed. Cir. 1984).

¹ All other rejections of claims 1 and 2 under the second paragraph of 35 U.S.C. § 112 have been withdrawn by the examiner in the answer.

Since "the completely transparent" and "the completely reflective" segments in lines 34 and 35 of claim 1 can only be referring to the transparent and reflective segments recited earlier in claim 1 as part of the optical beam splitter, we agree with appellant that the artisan could not possibly fail to understand the scope of the claimed invention. The indefiniteness noted by the examiner is at most a technical inconsistency which does not affect an artisan's ability to determine the scope of the claim. Therefore, we do not sustain the examiner's rejection of claim 1 under 35 U.S.C. § 112.

We now consider the rejection of claims 1 and 2 under 35 U.S.C. § 103. In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the examiner to establish a factual basis to support the legal conclusion of obviousness. See In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine

prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189

USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

This rejection is set forth by the examiner on pages 5-12 of the Final Rejection which is incorporated into the examiner's answer. Simply stated, the examiner finds that the combined teachings of Suganuma and Miller teach all the features of the claimed invention except for the provision in the beam splitter of transition zones which gradually change from full reflection to full transmission. The examiner indicates that this provision is well known to reduce the effects of diffraction, and the examiner cites Coale as evidence of this assertion.

After discussing the individual teachings of each of the references, appellant argues that there is no suggestion within these references that they should be combined in the manner proposed by the examiner. Specifically, appellant notes that neither Suganuma nor Miller even mentions diffraction, and appellant argues that there is no motivation to apply the diffraction grating teachings of Coale to

Suganuma or Miller. Appellant asserts that the electronic circuitry of Suganuma already corrects for diffraction effects so that there would be no need to consider Coale's teachings on diffraction. Finally, appellant argues that the diffraction grating of Coale solves the diffraction problem differently from the claimed invention and would not work when applied to the Suganuma beam splitter [brief, pages 16-27].

The examiner responds that even though Suganuma does not mention diffraction as a problem, the artisan would have recognized that Suganuma suffers diffraction effects which must be corrected. The examiner finds, therefore, that the artisan would be motivated to apply Coale's graded transition zones to Suganuma's mirrors in order to reduce the effects of diffraction.

Appellant responds again that Suganuma indicates no problem with diffraction and already corrects for the effects of diffraction. Appellant also responds that the diffraction grating of Coale does not produce diffraction like the single edge of Suganuma and would have no use in Suganuma. Finally, appellant summarizes why the artisan would not be motivated to combine the applied references in the manner proposed by the

examiner [reply brief].

After a careful consideration of this record, we agree with appellant that there is no motivation to modify the applied prior art in the manner proposed by the examiner. The examiner's finding that the artisan would find diffraction problems in Suganuma where none are disclosed is speculative at best and is not supported by the evidence. More importantly, the examiner's finding that the diffraction grating of Coale would be an effective solution to the diffraction "problem" of Suganuma is also pure speculation and is also not supported by the evidence. We agree with appellant that the electronic compensation provided in Suganuma could correct for any diffraction effects in Suganuma and, therefore, there would be no motivation to consider the teachings of Coale. Therefore, we do not sustain the examiner's rejection of claims 1 and 2 under 35 U.S.C. § 103.

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In summary, we have not sustained either of the examiner's rejections of the claims on appeal. Accordingly, the decision of the examiner rejecting claims 1 and 2 is reversed.

REVERSED

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KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JERRY SMITH)	
Administrative Patent Judge)	APPEALS AND
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STUART S. LEVY)	
Administrative Patent Judge)	

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